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The Urban Papers

Bread and Circuses

The Local Benefits of Sports and Cultural Businesses

John P. Palmer

In this issue...

A comprehensive look at the potential benefits from spending on sports and cultural businesses, which finds that they are typically quite small.

The Study in Brief

The benefits of having sports or cultural businesses in a community are not nearly as large as their proponents argue. One way to analyze those benefits is to look at the multiplier effects of spending on sports and culture. It is important, however, to look at *new* spending on sports or cultural events; if such spending is simply diverted from other spending in the community, there will be no multiplier effect. Also, it is often the case that much spending in a local economy tends to be for goods and services produced outside that economy.

The upshot is that the multipliers for spending on sports and culture tend to be small, and might even be zero or negative in some cases. Because the multipliers are low, new job creation is minimal. And many of the jobs that are created come at the expense of jobs and business in other locales.

A second type of benefit involves nonpecuniary benefits: the argument that having more sports and culture in a community improves the ambience, morale, civic pride, and desirability of living in it. The problem with this argument is that it is difficult to evaluate. To the extent that it has merit, however, the effect should be an increased demand for residential housing in the community. In towns such as Stratford and Niagara-on-the-Lake, Ontario, which host internationally recognized theater festivals, this increased demand shows up in the form of higher real estate values. Whether major league sports franchises or regional cultural events cause the same increase in demand is less clear — the increased demand does not show up in, for example, the housing data for Green Bay, Wisconsin, home to a major league football franchise.

The Author of This Issue

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Government funding for sporting and cultural events is an important issue for municipal, provincial, and federal decisionmakers. The Olympic Games, the Canada Summer Games, the Special Olympics, the Can-Am Police-Fire Games, and WrestleMania are just a few of the special sporting events for which local groups vie for financial support from their municipal — and often higher levels of — governments. In addition, nearly all professional sports teams seek some form of financial assistance from the various levels of government, often in the form of stadium construction costs. Add to these demands on the public purse the pleadings from theater groups, symphony orchestras, ballet and opera companies, art galleries, and others in the culture business, and the amount of funding support sought is sizable.

Before politicians at any level authorize subsidies for sports and cultural businesses, they need to know the benefits their community can expect to receive. A careful study of this question is especially important these days in light of the considerable attention that focused on Toronto's bid to host the 2008 Olympic Summer Games. Similar arguments and counterarguments will surely arise as the threatened departure of the Expos baseball franchise from Montreal is debated, as well as for future sporting and cultural events.

Invariably, the arguments justifying municipal or other support for sports and culture are posed in two forms. The first type of argument deals with economic spinoffs in one way or another; according to this argument, if government provides support for a particular sporting or cultural business, that support will generate large benefits for the rest of the economy. The second type of argument deals less with the dollars and cents of economic spinoffs and more with abstract notions of what might or might not be good for the community; this argument talks about the intrinsic value of being known as "a big league city" or a city that provides cultural opportunities for its residents.

This *Commentary* focuses primarily on the first type of argument, economic spinoffs, and deals with the second type, nonpecuniary benefits, in the last section. It looks at economic spinoffs from the perspectives of multiplier analysis and the impact on real estate values. As for the nonpecuniary benefits argument, although economists cannot assign dollar amounts to ethereal values, they can raise questions about how much citizens are paying — or are being asked to pay — to pursue those values. And it is certainly a mistake to look only at the expected size of the benefits without taking a closer look at who receives the benefits, a topic addressed later in the *Commentary*.

Spinoffs

Serious questions must be raised about the extent to which the majority of residents benefit from government support of sports and cultural businesses. Indeed, recent studies of some of the issues have indicated that the benefits from such economic activity are usually much smaller than their proponents typically argue — in fact,

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the "benefits" may even be negative.[1] At the same time, however, some similar studies also indicate that the benefits might be substantially greater than zero. Some types of business clearly create much wider-ranging spinoffs than others. One of the goals of this *Commentary* is to identify the instances in which the arguments involving spinoffs make economic sense and those in which they do not.

Most arguments seem to be based more on "rent seeking" than on solid economic analysis.

I have always been skeptical of claims that the spinoff effects from sports and cultural businesses are large (see, for example, Palmer 2000). Most such arguments seem to be based more on what economists call "rent seeking" than on solid economic analysis, meaning that these arguments tend to be put forward by individuals and groups who stand to benefit directly from having governments support such businesses. The beneficiaries of government support for sports and culture typically include the higher-income individuals who attend such events and who would have to pay more for their tickets or settle for lower-quality events if governments did not support them.[2] Other examples of beneficiaries are the participants (athletes, actors, musicians, and so on), who all benefit directly from having governments spend money to increase the demand for their services. These distributional issues are important and are discussed later. First, however, I consider the question of how big these spinoffs might be.

Multiplier Effects of Spending on Sports and Culture

One common way in which the spinoff argument is presented involves economic multipliers. In its most basic form, the multiplier argument holds that if there is $1,000 worth of new spending in an economy, whoever receives that $1,000 will re-spend most of it — say, 90 percent, or $900. Then, whoever receives the $900 will also re-spend about 90 percent of that, or $810; and whoever receives the $810 will re-spend 90 percent of that, and so on. After adding up all the re-spent amounts, the total amount of new spending in the economy as a result of the initial injection of $1,000 would be $10,000.[3] This result, while extreme and based on a number of hidden assumptions, relies on what is known as the "simple Keynesian multiplier."

The purported benefit from having a large multiplier attached to higher government spending on sports and culture (or anything else, for that matter) is that the large increase in economic activity makes people better off. Production grows, jobs increase, and incomes rise. The textbook concept of simple Keynesian multipliers has been discredited for macroeconomic use because it ignores price fluctuations, interest rate changes, and exchange rate variations; it also implicitly assumes that there are unemployed resources that will easily become used and usable (without raising costs!) as economic activity increases.

Ignoring the effects of most of these variables makes sense when studying local economies, and so simple Keynesian multipliers still have some relevance, if used

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1 For an estimate of the negative impact that a new stadium would have on the local economy, see Talalay and Kleindienst (2001).

2 For a recent discussion of the transfer from all taxpayers to the wealthier ones, see Siegfried and Peterson (2000).

3 The formula for adding up an infinite series of the form $1 + a + a^2 + a^3 + a^4 + \ldots$, where $a < 1$, is $1/(1 - a)$. In the example, $a = 0.9$, so the sum would be $\$1{,}000 \times 1/(1 - 0.9)$, or $\$1{,}000 \times 10$.

properly, in the case of local economies. Prices tend to remain constant for short periods, and even in the long run, price changes are usually the result of phenomena over which local governments have little, if any, control. It is also reasonable to assume that interest rates and exchange rates are determined outside, or exogenous to, the local economy. Consequently, a simple Keynesian multiplier that takes imports and taxes into account has potentially valuable applicability for local economies.[4]

Taking into account the amount of money re-spent — but on goods and services imported into the local economy — is very important for proper multiplier analysis. In a local setting, *imports* refers to anything brought into the local economy from outside it, possibly from a nearby municipality or even from another neighborhood within the municipality, depending on just what is meant by the *local economy*. As an extreme example, an injection of $1,000 into the local economy would not set off the Keynesian multiplier *at all* if the recipient of that money spent the entire amount in some community outside the local economy. In fact, the net effect would be negative if the $1,000 injection came from a tax burden that would not otherwise have been imposed on local residents.

Taking imports into consideration is especially important from the perspective of a provincial or federal government if all the benefits in one local economy are achieved at the expense of the economies of other localities. If the benefits that Montreal, for example, receives from spending on sporting or cultural events come at the expense of the economy of Quebec City, the net benefits to the province or to Canada could well be zero or even negative.[5]

If the benefits that Montreal receives from spending on sporting or cultural events come at the expense of the economy of Quebec City, the net benefits to the province or to Canada could well be zero or even negative.

In addition, to avoid overstating the size of the multiplier, one must include the marginal rate of taxation. If the recipient of the injection of $1,000 must pay, say, half that amount in taxes and then spends 90 percent of what is left, the spending in the second round would be only $450, not $900. And if the recipient of the $450 is also subject to a 50 percent marginal rate of taxation, the extra spending in the third round of spending would amount to only $202.50. If these and all subsequent rounds of spending were added up, they would amount to only $1,818.18, not $10,000. The multiplier would not be 10, as in the initial example, but only a little more than 1.8.

A major problem with applying multiplier analysis to local economies is that proponents of government support for any activity ignore the fundamental question of opportunity costs, or what might have been done with the government funding if their pet project had not been funded. Sometimes government spending on one

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4 Whether it is possible to increase economic activity without raising costs is, however, a much thornier question. If local multipliers are, in fact, large for some types of injections into the local spending stream, it makes sense that the increased economic activity will raise costs. After all, one of the basic problems of economics is scarcity, and one can only expect that increased economic activity will create more demand for scarce inputs, thus driving up their prices. And while some inputs may be underemployed, mobile, or readily produced with little increase in costs, other inputs, such as land, will almost surely increase in value (and hence opportunity cost) as economic activity increases. This issue is dealt with at length in the second portion of this *Commentary*.

5 The vying for grants by different localities involves the use of scarce resources. If only one area benefits, the overall net benefit would most likely be less than zero. This type of rent-seeking activity is the result of what economists refer to as a *negative-sum game*. A reasonable analogy is the purchase of lottery tickets: those who purchase tickets and win come out ahead, but, overall, purchasers lose money.

project simply means there will be less government spending on other projects, and the multiplier effect will, on balance, be zero.[6] Alternatively, government spending on a project might take place at the expense of higher taxes and lower disposable incomes for the local residents; again, the multiplier in such a case might be small, zero, or possibly even negative.

To be valid, multiplier analysis must be applied only to new spending, not just to spending that is diverted from one local expenditure to a different one.

Finally, to be valid, multiplier analysis must be applied only to *new* spending, not just to spending that is diverted from one local expenditure to a different one. In the case of sports and cultural businesses, much of the spending by local residents is simply diverted from one form of entertainment to another; to the extent this transfer of local spending takes place between activities, no new spending is induced by the cultural or sports business. Rather, for a multiplier effect to occur, the new spending must come from outside the community or from savings. For example, money that is spent on attending a ballet rather than an opera represents no *new* spending in the local economy, and so the multiplier would not apply to it.[7] Likewise, if money spent on meals while attending a sporting or cultural event would have been spent anyway on meals at other restaurants in the area at roughly same time, it would be inappropriate to consider this amount as "new" spending within the local economy. New spending comes from customers who live outside the local area or from those who would not otherwise have patronized local restaurants had they not attended the event.[8] New spending can also come from donations, grants, or subsidies from individuals, taxpayers, or corporations from outside the local area.[9] It follows, then, that spending in restaurants by someone who would otherwise not be spending anything in the local economy *should* be regarded as new spending within the local economy.

When local multipliers are estimated, not only must both the transfer of spending in the community and the effects of imports be taken into account, but a distinction must be made between supporters' (rent seekers') optimistic projections on the one hand and careful analysis on the other. Although some supporters of local government subsidies of sports have estimated multipliers as high as seven, numerous studies have found the multipliers to be near zero or possibly even negative.[10]

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6 The issue of opportunity costs lies at the heart of any economic analysis. Resources that are used for one activity must be drawn away from other activities. This realization often affects policy decisions, as, for example, the governor of Florida indicated when he recently questioned whether state funding for education might be more important than funding for a new stadium for a professional sports team.

7 Alternatively, the multiplier could be applied to the expansion in the economy due to the new spending on the ballet, but then it should also be applied to the contraction in the economy due to the decreased spending on the opera. Typically, these two effects cancel each other out (I explore exceptions later in the paper).

8 If the spending in economy A is merely diverted from economy B, then economy B will experience a multiplier contraction while economy A experiences a multiplier expansion. If both economies are in the same municipality (or province or country), the net effect of the diverted spending would be roughly zero, when aggregated across both economies.

9 Even in these cases, however, one must allow for offsetting effects: government or corporate grants to, say, musical groups in Toronto may come at the expense of grants to other organizations in the area. And grants are not without costs: often, taxes will go up or corporate dividends will go down, to some extent reducing disposable incomes, even at the local level.

10 See, for example, KPMG (1996). Some of the best-known work countering such inadequate estimates is Baade (1996). See also Keating (1999).

Refining Multiplier Analysis

Multiplier analysis depends crucially on the assumptions about the size of the underlying variables. As I hope to make clear in this section, different sporting and cultural events generate different multipliers because of the way the initial spending affects the economy and because of the different sources of the new spending. This section begins with a refinement of some of the best work done to date. I then apply these refinements to minor league sports and regional cultural events — activities that are rarely considered systematically.

Siegfried and Zimbalist (2000) explore what might be considered a reasonable range for a multiplier applied to major league sports teams. Their multiplier incorporates the high marginal tax rates most owners and players face in major league sports. It also accounts for the fact that much of the second-round spending occurs for goods and services produced outside the community. In algebraic form, Siegfried and Zimbalist's local multiplier is a standard one:

$$\text{multiplier} = 1/[1 - \text{MPC}(1 - \text{MPI})(1 - t)],$$

where MPC is the average marginal propensity to consume in the community, MPI is the marginal propensity to import goods produced outside the community, and t is the marginal rate of taxation (MRT). As one can see from inserting numbers into the formula for the multiplier, if MPC is 0.9 and if imports and taxes are ignored (or if MPI and t are set equal to zero), this multiplier can be as large as 10, as it was in my initial example. But once imports and taxes are taken into account, the size of the multiplier becomes much smaller.

The marginal propensity to consume — the portion of additional income that will be spent for consumption — is a basic concept used in all multiplier analyses. The concept requires only a slight extension for application to major league sports and cultural activities. In major league baseball, the players are paid very large sums of money. They and the team owners typically are among the highest income earners and can take advantage of many tax-reducing savings programs. Furthermore, much of their spending is on goods or services produced outside the local area. Hence, one might expect the multiplier for major league sports spending to be small.

Major league baseball players and team owners typically are among the highest income earners and can take advantage of many tax-reducing savings programs. Furthermore, much of their spending is on goods or services produced outside the local area.

In the cases of minor league sports and cultural activities other than the very popular, players and performers have much lower incomes. Accordingly, they are likely to have a much higher MPC, a lower marginal rate of taxation (MRT), and a lower MPI. Hence, the multipliers for these activities, by comparison with those for major league sports, will be noticeably larger. For all groups, however, the second and subsequent rounds of spending will fall much more in line with the community averages than the first round, even though the initial impacts are likely to be quite different.

Siegfried and Zimbalist (2000) estimate that, for major league sports, the MPC is roughly two-thirds, the MPI is about one-half, and the MRT is 0.4, which suggests a major league sports multiplier of about 1.25, which is considerably smaller than that estimated by many consulting reports commissioned in support of government subsidies to major league sports (the authors' paper contains a long list of examples). Of course, there is considerable margin for error in these estimates. In particular, the MPC is likely higher and the MPI a bit lower for second and subsequent rounds

Table 1: ***The Impact of Major League Baseball on a Local Economy***

	Estimates by Siegfried and Zimbalist	Alternative Estimates
Revenues *($ millions)*	85	85
Amount of revenue that is new spending *($ millions)*	25	25
Amount of new spending that is local value added *($ millions)*	12.5	12.5
Multiplier	1.25	1.51
Impact of spending *($ millions)*	15.625	18.875
Amount of revenue diverted from other local spending *($ millions)*	60	60
Diverted revenue lost to the local economy (1st round) *($ millions)*	Included in multiplier calculation	9
Multiplier applied to other local spending	1.51	1.51
Net multiplier applied to diverted local spending	–0.26	0
Impact of diverted spending *($ millions)*	–15.60	–13.59
Net impact on local economy *($ millions)*	0.025	5.285

Sources: Siegfried and Zimbalist 2000, 107–108; author's calculations.

of spending. At the same time, it seems unlikely that most major league sports players spend even a third of their additional income in the local community, so Siegfried and Zimbalist's numbers may be good, albeit rough, approximations.

Although new spending on a major sports or cultural event has an impact on the economy, much of a community's spending on any leisure activity is simply diverted from what people might have spent on some other leisure activity within that community. Some people might decide to rent fewer videos when they attend the theater; others might spend less at local nightclubs or church euchre tournaments. The possibilities for substitution are abundant. And if spending on other local activities has a higher local multiplier than spending on a major sporting or cultural event, the net impact of having a major sporting or cultural business located in the city could even be negative.

To see the full effects of the various multipliers, consider the examples in Tables 1 and 2. The data in column 2 of Table 1 are taken directly from Siegfried and Zimbalist (2000). Starting with revenue of approximately $85 million, they consider the case in which roughly $25 million is the result of "new" spending (primarily by tourists and outside sponsors) and the other $60 million is diverted from other local businesses. They further estimate that only half of the $25 million of "new" spending is spent on locally produced goods and services. Assuming a multiplier of 1.5, this means that new spending on major league baseball has an impact of about $15.625 million on the local economy. But the story does not end there.

Because $60 million is diverted from other local spending, with different multipliers, Siegfried and Zimbalist also examine the net effect of this diversion on the local economy. They posit that for this diverted spending the appropriate MPC would be 0.8, the MPI 0.35, and the MRT 0.35. These numbers yield a local multiplier of 1.51 for other local entertainment spending.[11] The result is that a negative net multiplier with a value of –0.26 is applied to all diverted spending. Applying this multiplier to the $60 million of diverted spending leads to a negative impact on the local economy, which almost completely offsets the positive impact. And if higher MPCs or lower MPIs and MRTs were used in the calculations, the overall net impact could quite plausibly be negative.

I am not altogether happy with these estimates for several reasons. First, I see no reason for the multipliers for local spending to be so different between baseball

11 It is not altogether clear why the multipliers should be different after the first or second round of spending. Once the portion of the money spent locally by baseball players or team owners or at a nightclub or euchre tournament is re-spent, the average MPC, MPI, and MRT should be roughly the same, regardless of where the initial spending took place.

Money diverted from other forms of local entertainment spending to professional sports would have a draining effect on the local economy, especially to the extent that owners and players spend their incomes outside the local economy.

and other local spending after the second round of spending. Second, it is unreasonable to ignore the fact that money diverted from other forms of local entertainment spending to professional sports would have a draining effect on the local economy, especially to the extent that owners and players spend their incomes outside the local economy. And third, it seems plausible to me that, in some situations and in some localities, the net impact on a local economy could be much larger — say, in the cases of the Olympic Games wherever they are held, or Green Bay, Wisconsin, home of the National Football League (NFL) Packers, or the Stratford and Shaw Festivals in Ontario, where tourism, not diverted local spending, accounts for a very large portion of the revenue for the business. In the next few paragraphs, I examine the first two of these adjustments to Siegfried and Zimbalist's numbers; I then consider the third adjustment.

When Siegfried and Zimbalist whittle down the $85 million in revenue to the point that only $12.5 million is new spending on local economic activity, they have already taken into account the fact that team owners and players have very high MTRs and MPIs, and comparatively low MPCs. These facts should not be included in the multiplier the authors apply to the $12.5 million in new local spending. That money goes to local producers and is likely to have the same multiplier as any other spending within the local community. It seems inappropriate to use different multipliers for different spending when there are no overwhelming differences.

A better approach is to assume that, once the different spending practices of team owners and players are accounted for, the local multiplier should be roughly the same both for the re-spending by local businesses of their dollars and for the diverted spending from other local businesses. And since this multiplier should not be wildly different from community averages, it makes sense to assume an MPC of 0.8, an MPI of 0.35, and an MRT of 0.35, the numbers Siegfried and Zimbalist use for calculating the multiplier to be applied to diverted local spending. These revised numbers are shown in the last column of Table 1.

The second problem with Siegfried and Zimbalist's numbers is that diverted spending is likely to have a negative impact on the local economy, as they say, but in a different way. If $60 million is diverted from other spending within the local economy, two questions must be answered in order to calculate the impact of this diversion on the local economy: What is the initial impact of the diversion? and What is the appropriate multiplier to apply to that impact?

If the $60 million goes, not to those who would have spent 65 percent of it in the local economy, as Siegfried and Zimbalist seem to assume with their MPI of 0.35, but to players and team owners who spend only half the revenues locally, the net loss of spending in the local economy would be 65 minus 50 percent = 15 percent of the diverted $60 million, or $9 million. In other words, there would be a net increase of $9 million in imports due to the diversion of spending from other local entertainment to major league sports. If one applies the local multiplier of 1.51 to this lost spending of $9 million, the diverted spending would withdraw a total of $13.590 million from the local economy, leaving a net impact of only $5.285 million.[12]

12 Another way of seeing this point is to look at net new spending in the local economy. Of the $85 million in revenues, only $12.5 million is spent locally. But because $60 million is diverted from other local spending and because that diversion leads to a $9 million net increase in imports, the net amount of new spending is only $3.5 million. Applying the multiplier of 1.51 to that net injection into the economy leads to a total impact of $5.285 million.

It is readily apparent that small differences in the numbers used and in the way they are applied can lead to very large differences in the estimates of the overall impact of a major league team on a local community. Instead of a $25,000 impact, the number might more reasonably be estimated at $5 million.[13] Such a large difference highlights the need for care in the numbers chosen for multiplier analysis.

Even $5 million, however, which seems like a lot of money, does not represent a very large overall impact from a major league franchise with revenues of $85 million, since the multiplier is small and is applied only to net new injections into the local spending stream; much of the $85 million is simply diverted from other local spending. More important, not all of the $5 million in new spending is available to help pay for municipal bonds or other expenses associated with government support of the team. The tax benefits to the municipality from having a franchise are typically quite small. Income taxes are paid to the federal and provincial governments and, as a portion of new spending, amount to very little that is available directly to municipal governments. And although the practice of charging extra local taxes has become widespread in many parts of the United States, it is far less prevalent in Canada.[14] Consequently, even though municipal governments are expected to help fund new stadia, arenas, or performing arts centers, the extra economic activity from these venues generates little additional government revenue. In the end, much of the tax benefit, such as it is, to local governments comes from increased property values, which I take up later in this *Commentary*.

Even though municipal governments are expected to help fund new stadia, arenas, or performing arts centers, the extra economic activity from these venues generates little additional government revenue.

At the other extreme, suppose that much of the total revenue *is* generated from attendance by customers living outside the local area and from provincial and federal government grants.[15] This scenario might be relevant for events of large international significance, such as the Olympic Games or a major automobile race.[16] In this case, the amount of new spending could easily be a much higher proportion of total revenue. In addition, spending in restaurants and hotels by visitors who would not otherwise be in the area should be included.[17] Given these considerations,

13 A reviewer of an earlier draft of this *Commentary* believes I have been far too positive in my approach. I admit to trying to avoid appearing too biased against finding a positive number for the local multiplier, which perhaps explains why I chose the numbers I did. The reviewer suggests using much higher MPIs and MRTs, which would generate sizable negative multipliers in many instances. This criticism emphasizes the point that understanding the assumptions about the numbers used for multiplier analysis is paramount for those studying this issue.

14 For a careful discussion of the tax benefits of a major league sports franchise, see Rappaport and Wilkerson 2001.

15 Recall once again, however, that this analysis ignores any secondary effects from government grants. In reality, such grants do not occur in isolation from other fiscal effects: taxes must be raised, other grants cut, or funds borrowed. Any of these fiscal effects would have an impact, to some degree, on the local economy.

16 David Laidler, a reviewer of this paper, says that multiplier analysis typically refers to flows of production and income and is not nearly as relevant for one-shot events such as the Olympic Games. Nevertheless, because this analysis focuses on the dollar amounts, not just the size of the multiplier, it is easy to distinguish the cases. For one-shot events, the dollar amount shown in the tables is relevant and correct. For ongoing events, it might be advisable to calculate the net present value of the effects and compare that amount with other relevant present values.

17 The impact of hosting the Olympic Games or a major automobile race would not be as large as these figures suggest, however, if the local economy bumps up against capacity constraints. Once hotels and other types of accommodation are full, it is difficult for more visitors to inject new spending into the local economy.

Table 2: ***Alternative Estimates of the Impact of Major League Baseball on a Local Economy***

	Siegfried and Zimbalist's Estimate of the Size of the Multiplier	An Alternative Estimate of the Size of the Multiplier
Revenue *($ millions)*	85	85
Amount of revenue that is new spending *($ millions)*	70[a]	70[a]
Amount of new spending that is local value added *($ millions)*	35	35
Multiplier	1.25	1.51
Impact of spending *($ millions)*	43.75	52.85
Amount of revenue diverted from other local spending *($ millions)*	15	15
Diverted revenue lost to the local economy (1st round)	Included in multiplier calculation	15% of $15 million = $2.25 million
Multiplier applied to other local spending	1.51	1.51
Net multiplier applied to diverted local spending	-0.26	0
Impact of diverted spending *($ millions)*	-3.90	-3.40
Net impact on local economy *($ millions)*	39.85	49.45

[a] Assuming $10 million in government grants

Sources: Siegfried and Zimbalist 2000, 107–108; author's calculations.

it is conceivable that as much as $60 million (if overall revenue totaled $85 million, to keep the examples comparable) could be new spending, and very little of the total spending would be diverted from other local businesses.[18] A comparison of this possibility with that set out by Siegfried and Zimbalist is presented in Table 2. As the table shows, in this case the impact on the local economy would be quite substantial, regardless of the assumptions about the sizes of the various components of the local multiplier.

The only difference between Tables 1 and 2 is that Table 1 assumes that most of the revenue from the business is diverted from other local spending, whereas Table 2 assumes that most of the revenue represents new spending from outside the local economy. Which numbers are appropriate will vary from case to case. Attracting a major league sports franchise to a large metropolitan area is likely to involve numbers much closer to those Siegfried and Zimbalist use; however, attracting many out-of-town and international visitors, as Stratford and Niagara-on-the-Lake do or as the 2008 Olympic Summer Games would have done (had Toronto's bid been successful), is likely to have much larger effects than those Siegfried and Zimbalist present.

Clearly, determining the actual impact on a local economy requires considerable care in the use of the data. It turns out that, in larger metropolitan areas, many of the visitors who attend major sporting and cultural events are in town for other reasons, so their spending in hotels and restaurants should not be included as new spending. Furthermore, it is important to define the geographic size of the local area carefully. If it is defined to be small, more of the spending will be new spending by visitors, but the MPI will also be much larger, offsetting this effect (for a detailed discussion of this problem, see Siegfried and Zimbalist 2000).

The alternative numbers I present are similar to those Siegfried and Zimbalist use. The main difference is that mine have larger positive net impacts, mainly because I use more plausible numbers for the second and subsequent rounds of spending in the local economy.

Multipliers for Minor League Sports and Regional Cultural Ventures

For minor league sports and regional cultural businesses (such as theater, music, and dance), the impact of spending on the local economy is likely to be much different

18 This is all the more likely for such cultural centers as Stratford and Niagara-on-the-Lake (home of the Shaw Festival), Ontario, where nearly all the spending at the theaters represents new spending in the community, as does much of the restaurant and hotel spending.

Table 3: ***The Impact of Minor League Sports and Regional Cultural Businesses on the Local Economy***

	Minor League Sports and Regional Cultural Events	Using a Lower Local Multiplier
Revenue *($ millions)*	5	5
Amount of revenue that is new spending *($ millions)*	2	2
Amount of new spending that is local value added *($ millions)*	1.5	1.5
Multiplier	2.00	1.51
Impact of spending *($ millions)*	3.000	2.265
Amount of revenue diverted from other local spending *($ millions)*	3	3
Multiplier applied to other local spending	2.00	1.51
Net multiplier applied to diverted local spending	0	0
Impact of diverted spending	0	0
Net impact on local economy *($ millions)*	3.000	2.265

Source: Author's calculations.

than that for major league sports. One can, for example, reasonably expect that the MPC is much higher, perhaps as high as 0.9. People who receive incomes from these activities have lower incomes and tend to spend much larger portions of their incomes in the local community. Similarly, the MPI might be as low as one-third and the MRT might even be as low as one-sixth. Substituting these numbers into the multiplier equation yields a multiplier of 2, suggesting that new spending on these activities generates additional local production of an amount that is roughly double that of the new spending. Once again, however, it is inappropriate to use wildly different numbers for the components of the multiplier just because the initial impact of the revenue is different. Once local minor league players and owners or actors or musicians spend their income, it all goes into the local spending stream in approximately the same way.

Table 3 shows two scenarios for the impact of spending on the local economy when minor league sports and regional cultural events are considered. If annual revenue totals $5 million, one can reasonably assume that no more than $2 million of that amount will be new spending in the local economy; the rest will be diverted from other local spending. And because the economic activity is more likely to involve local businesses, one can assume that three-quarters of the new spending will generate local value added. Finally, one can assume that the multiplier for new spending is the same as that for diverted spending, and that the multiplier for what might have been spent on alternatives is also the same. With these assumptions about the numbers, Table 3 shows that a business with revenue of $5 million will have a net impact of $3 million on the economy. If one applies a multiplier of only 1.51, to compare Table 3 with Tables 1 and 2, the net impact will be only $2.265 million.

Again, as with Tables 1 and 2, the estimates in Table 3 are sensitive to the underlying assumptions. If the local multiplier is closer to 1.51 — the number resulting from Siegfried and Zimbalist's assumptions — and if only half of the new spending generates local value added, the net impact will be only $1.51 million, about half the impact presented in Table 3, column 2.

The upshot of these calculations is that, despite the apparent precision of the numbers, they depend crucially on the underlying assumptions on which they are based. Siegfried and Zimbalist, while cautious about estimating that the net multiplier for major league sports may be near zero, seem confident that the economic impact on local economies is small.[19] The alternative estimates presented here do not reject

19 Siegfried and Zimbalist are not alone in their conclusions. See, for example, Baade (2000), who presents a case study of the effects of the Kingdome (now demolished) on its Seattle neighborhood. He concludes that, although some restaurants and sports stores within a very...

those of Siegfried and Zimbalist, but they do allow for the possibility that the impact would be large, especially if the amount of new spending by visitors or through government grants is large and the amount of diversion from other local spending is small, as might be the case for events such as a one-time WrestleMania contest or the Olympic Games. The key to understanding the competing claims must involve careful case-by-case research about the amount of new spending, especially by visitors from outside the local economy.[20]

The Importance of Fixed Factors

All too often, proponents of government subsidization of local sports and cultural businesses pose their arguments in terms of job creation and the reduction of unemployment (see, for example, Canada 1998). The problem with such arguments is that they fail to recognize that labor is a highly mobile factor of production. To the extent that employers hire labor in a competitive market, and to the extent that labor moves freely from nearby communities (or even more distant ones), the job-creation argument is bogus. Jobs created by economic activity in one community are often nothing more than jobs lost elsewhere in the province or country.[21]

The job-creation argument is bogus. Jobs created by economic activity in one community are often nothing more than jobs lost elsewhere in the province or country.

In the long run, the primary beneficiaries of increased economic activity in a specific community are the owners of fixed, not mobile, factors. As an increase in economic activity leads to an increase in the demand for labor, more labor moves to the area. Land, in contrast, is a fixed factor, and an increase in the demand for it simply raises real estate values. And to the extent that external benefits are captured and internalized within the community, they become gains for the owners of real estate in the community. Accordingly, a study of the effects of cultural and sports businesses on community real estate prices should give a fairly clear idea of the overall benefits these sorts of activities bring to a community.

Unfortunately, it is virtually impossible to identify the effects of a single type of business activity on real estate values in a large metropolitan area such as Toronto, Vancouver, or Montreal. An impact of several million dollars per year could easily be lost in the error term of an estimation. Fortunately, there are examples of local areas in which it is possible to study the effects of cultural businesses on the local economy. Two such examples are Stratford and Niagara-on-the-Lake, Ontario.

Note 19 - cont'd.

...small radius of the stadium benefited from its existence, these effects were not felt even four or five blocks from it. He also points out that the stadium had a negative effect on some other businesses by causing congestion on game days. See also Noll and Zimbalist (1997).

20 In a discussion on CBC Newsworld's *Face-Off* in which I participated in autumn 1996, one panelist argued that those who spent money on tickets for Winnipeg Jets hockey games would, once the team left town, spend it at casinos located outside the city, the province, or even the country. While this argument might contain some grain of truth, the actual size of such effects must be assessed carefully before one can place much credence in this argument or in the conclusions to which it leads.

21 This point is very simple, yet it seems to escape many people. Even the writers who find that the presence of a major league sports franchise creates few new jobs rarely mention it. (See Rappaport and Wilkerson 2001.)

Real Estate Values

Stratford and Niagara-on-the Lake, Ontario

If, as I argued above, the long-run benefits accrue primarily to the owners of fixed factors, especially real estate, the effects of these benefits should show up in the form of higher property values in the community. Table 4 shows the average estimated fair market prices of detached bungalows and standard two-storey homes in the real estate regions of Stratford and Niagara-on-the-Lake and areas near both these locations. The table shows quite clearly that the two towns, with their major, internationally acclaimed summer theater seasons, command higher real estate prices.

Consider Stratford first. The differences in its housing prices are smaller than those in Niagara-on-the-Lake in part because the prices in the comparison areas are higher and in part because Stratford has considerable business in its local area in addition to the Stratford Festival. Moreover, Stratford is larger than Niagara-on-the-Lake, and so the increased demand for real estate resulting from the theater festival is spread over more units. In summary, housing prices are approximately $5,000 to $10,000 higher in Stratford than they would have been without the festival. With roughly 8,000 houses in Stratford (*Financial Post* 2001), it appears that the festival has added between $40 million and $80 million to the value of residential real estate in the city. At a 7 percent rate of interest, the annual benefit of the festival to the city's homeowners is probably between $2.8 million and $5.6 million.

In Niagara-on-the-Lake, the difference in residential real estate prices in the town versus those in surrounding areas is about $50,000, which is much greater than in the Stratford case, partly because the town is smaller (fewer houses means more competition among potential buyers, thus driving up the price) and partly because prices in the surrounding areas drop off much more rapidly than they do in the Kitchener-Waterloo area.[22] Of that difference in value, one can conservatively estimate that $30,000 is due to the presence of the Shaw Festival. With about 4,000 houses in the town, it appears that the festival could be worth perhaps $120 million to local homeowners; again, at an interest rate of 7 percent, this represents an annual benefit of some $8.4 million.

The Shaw and Stratford festivals confer large annual benefits on the owners of real estate in the communities in which they are held.

These numbers are very rough, but they indicate qualitatively that the Shaw and Stratford festivals confer large annual benefits on the owners of real estate in the communities in which they are held. Indeed, these numbers are probably serious underestimates because they do not include the effects on the value of *commercial* real estate. Nevertheless, they indicate that, in these two instances at least — when so much of the spending on festival activities is new spending coming from outside the communities — the benefits of these activities to the owners of local real estate are sizable.

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22 There seems no reason to suppose that the much higher values in Niagara-on-the-Lake are due significantly to its location on Lake Ontario; the town's mushrooming bed-and-breakfast industry, for example, has virtually nothing to do with the lake and everything to do with the Shaw Festival.

Table 4: ***Representative Real Estate Prices in Stratford and Niagara-on-the-Lake, Ontario, and Surrounding Areas, 1999–2001***

Real Estate Area	Average Price by Type of Housing: Detached Bungalow	Average Price by Type of Housing: Standard Two-Storey House
	(dollars)	
Stratford, Ontario, and Surrounding Areas		
Waterloo-Stratford	165,333	170,500
Waterloo	162,667	159,000
Kitchener	155,833	158,333
Niagara-on-the-Lake, Ontario, and Surrounding Areas		
St. Catharines/ Niagara-on-the-Lake	170,000	150,000
St. Catharines	124,333	110,667
St. Catharines–Fonthill*	121,000	112,500
St. Catharines–Niagara Falls	113,667	101,333
St. Catharines–Welland*	120,500	96,000

Note: Housing prices are as of January 1999, 2000, and 2001, and are estimates by real estate company employees and affiliates, rather than actual averages of transaction prices or the result of sophisticated calculations based on hedonic price indices. Accordingly, they are, at best, rough estimates. The numbers for Niagara-on-the-Lake are a particular concern because the same prices are listed for each of the three years. Also, the data for bungalows in Stratford seemed quite low prior to 2000 and then made a very sizable jump upward in 2000, casting some doubt on the reliability of that series. Thus, questions about the reliability of these data mean that the ensuing analysis must be considered indicative, and not as firm as one would like.

Each line represents a different geographic real estate region. For example, Waterloo-Stratford is a separate geographic region from Waterloo.

* Data are available only for 2000 and 2001.

Source: Royal LePage.

Furthermore, if a major cultural event in a town or city also creates other, indirect nonpecuniary benefits, more people will be willing to pay more to live in there. Thus, looking at real estate values also captures many of the other benefits to the community that do not directly show up in multiplier analysis or job-creation analysis.

Green Bay, Wisconsin

In contrast to the situation of a popular festival in a small town or city, it is very difficult to analyze the impact on local real estate of a major league sports franchise, since nearly all such teams are located in large metropolitan areas where many factors influence housing prices. An exception, however, is Green Bay, Wisconsin, a relatively small city that hosts the Packers of the NFL, although the best data available about housing and real estate prices there come from the 1990 US census and are less precise than the data for Canadian cities.

Table 5 shows housing prices, population, and housing by type in Green Bay and the neighboring cities of Appleton and Oshkosh, whose economies, like those of Kitchener, Waterloo, and St. Catharines, Ontario, are more diversified than that of the town that hosts the cultural or sports activity.

The table shows that median housing prices are similar in both Green Bay Town and Oshkosh Town, and that the same holds true (though at a lower level) for the larger metropolitan areas of both cities, while house prices in Appleton are in-between the two.

Based on these data, the effects of the Stratford and Shaw festivals in Canada appear to differ from those of the Packers on Green Bay.[23] One big reason for the difference is that the Packers typically have only eight or nine events each year, whereas the theater festivals are very active, with multiple performances on multiple stages on a daily basis for four or five months of the year. This difference

23 One reader of an earlier draft of this *Commentary* pointed out that the percentage difference in house prices between Green Bay Town and Oshkosh Town (or between Green Bay City and Oshkosh City) is about the same as the percentage difference in bungalow prices between Stratford and Waterloo. It is unfortunate that more comparable data are not available. At the same time, however, Green Bay City has prices that are *lower* than those in Appleton; moreover, the percentage difference in bungalow prices between Stratford and Waterloo is the lowest of all those observed involving Stratford or Niagara-on-the-Lake.

Table 5: ***Housing Types and Prices in Selected Wisconsin Communities***

	Green Bay City	Green Bay Town	Appleton City	Oshkosh City	Oshkosh Town
Population	96,466	1,292	65,695	55,006	4,655
Total number of units	39,726	575	25,528	21,827	1,512
Housing type					
1 unit, detached	21,761	517	16,896	12,753	1,139
1 unit, attached	2,055	1	724	403	12
2–4 units	8,192	15	4,148	4,864	86
5–9 units	2,581	1	1,130	1,124	12
10 or more units	4,446	0	2,303	2,253	31
Mobile homes, other	691	41	327	430	232
Median house price *(US $)*	55,500	75,000	64,400	53,800	73,700

Source: United States 1991.

is important: Even if more fans attend eight Packers' games than attend an entire season in Stratford, entrepreneurs are much more likely to build hotels and restaurants (and convert private homes into bed-and-breakfasts) if they anticipate a steady demand over four or five months than if they expect a spurt in demand only eight times a year. Furthermore, because of the wide variety of plays to see during a visit to a theater festival, people are much more likely to visit Stratford or Niagara-on-the-Lake and spend a night or two at a local hotel, motel, or bed-and-breakfast than they are to spend even one night in Green Bay.[24] This sustained demand over a four- or five-month period for overnight sleeping accommodations (and additional restaurant meals) is likely to be one of the main forces driving up real estate values in Stratford and Niagara-on-the-Lake, but leaving housing prices comparatively unaffected in Green Bay.

Most sports and cultural businesses do not resemble either the Stratford or Shaw Festival. These two cultural businesses attract substantial amounts of new spending, both by visitors and in the form of sponsorships, donations, and government grants. Smaller regional theaters, Toronto theaters, and most major league and minor league sports businesses do not draw nearly so large a proportion of new spending from outside the communities, nor are visitors likely to stay as long or spend as much money for these other events. Consequently, the estimates for the Stratford and Shaw Festivals are likely at the upper limit of potential benefits brought to communities from these types of business. Indeed, the data on housing prices for

24 Stereotypical behavior for an NFL fan involves loading up the SUV with barbecue equipment, sausages, and beer early in the morning, driving to the game, and having a tailgate party in the parking lot. This type of behavior adds little or nothing to the local economy beyond what is paid for the tickets themselves. Stereotypical behavior of a festival theater patron involves spending a night or two in town, eating in local restaurants, and shopping in the numerous boutiques, all of which inject new spending into the local economy and add to the demand for local real estate. To the extent that these stereotypes reflect the differences between Green Bay and Stratford or Niagara-on-the-Lake, they help account for the differences in the impacts on local economies and local housing prices.

Green Bay fail to show that having a major league football team in that city has had a noticeable effect on real estate values there.

The results for these three cities should not be surprising. Stratford and Niagara-on-the-Lake draw large audiences from great distances, many of whom spend several nights in the area while attending plays. These visitors inject a great deal of new spending into the local economies. Green Bay, and other cities hosting major league sports teams, tend to have a much higher proportion of single-day visitors who inject far less into the local economies.[25] Similarly, people are less likely to visit a city for a prolonged period to attend regional theater or minor league sporting events.[26]

In fact, the numbers for major league sports, especially the NFL, indicate virtually no net impact on the local economies. With numbers like these, it is not surprising that voters in Minnesota and Washington recently voted against public funding of stadia; that many Canadians were outraged by suggestions that National Hockey League teams should receive federal government subsidies; that the Florida Senate has indicated strong resistance to providing public funding for a new retractable dome stadium for the Florida Marlins baseball team; or that Los Angeles appears to be complacent, at best, about having no NFL teams located in its metropolitan area.

Quality of Life

Nevertheless, many politicians and rent seekers continue to argue in favor of government subsidies for major league sports. However, with growing evidence that the multipliers and other spin-offs are much smaller than was assumed to be the case, politicians are now beginning to focus on less pecuniary factors to bolster their arguments. For example, in a debate about where to locate a stadium in the Miami, Florida area, Miami mayor Alex Penelas said:

> People want Miami to be a world-class community, but they are not willing to accept what goes along with it....What is going to be the tangible loss if the Marlins leave South Florida? There may not be many jobs lost, but we would lose prominent athletes and executives who serve as role models and lend their names and dollars. There is some economic benefit that is tangible, but I think the stronger argument is what is intangible and what having the team here means to the community. (Quoted in Bloom 2001.)

If culture and role models are the real goals of local politicians, it seems reasonable that devoting more money to education and the arts would have at least as much value as subsidizing professional sports.

Of course, if culture and role models are the real goals of local politicians, it seems reasonable that devoting more money to education and the arts would have at least as much value as subsidizing professional sports.

This quality-of-life argument in favor of hosting a major league sports franchise is carefully examined in Rappaport and Wilkerson (2001). While the authors are

25 Cities that host major league baseball teams might do better than others because baseball teams play nearly every day, making it worthwhile for people to visit the city, spend a night or two, and see two or three games during their visit.

26 There are exceptions, of course. Minor league sports tournaments typically involve many teams and many games over several days. The Little League World Series attracts baseball fans from far and wide to the small town of Williamsport, Pennsylvania, and many stay for several nights.

unable to determine whether having, or losing, such a franchise has any effect on a city's real estate values, they nevertheless conclude that having one does indeed add to the overall quality of life in a city. Their argument, simply put, is that many cities — including St. Louis, Cleveland, Baltimore, Houston, and Oakland — that lost NFL franchises subsequently made considerable efforts, in terms of tax concessions and promised contributions to new facilities, to attract a replacement. At the same time, however, many cities that have lost franchises — such as Winnipeg and Quebec City (hockey), Kansas City, San Diego, and Vancouver (basketball), and Los Angeles (football) — have not been particularly aggressive in offering pecuniary incentives to attract a replacement.

One reason Rappaport and Wilkerson's argument is less than persuasive is that a city's attempt to attract a new franchise may be as much the result of increased rent-seeking efforts as anything else. It is difficult to ascribe any apparent change in voters' support for such a move to an epiphanous realization that they had lost something of value when the original franchise left town. However, the change of heart might be explained by the economics of group decisionmaking and free riding. Those who stand to gain rents from retaining an existing franchise or from attracting a new one have an incentive not to contribute to political and financial support for it, but to free ride by letting others do the work of retaining an existing franchise for them. They end up playing a type of prisoner's dilemma game[27] and, in the process, since they have an incentive not to contribute support, they sometimes lose both the game and the franchise. Once the franchise is lost, though, some of these free riders have an increased incentive to support attempts to attract a new one. If this is the case, Rappaport and Wilkerson's argument that this increased support measures quality of life falls flat — the increased support is just the result of sophisticated coalition building.

Some people may wish to live in a community simply because of the presence of a major league sports franchise but there is little evidence that this desire has any impact on real estate values.

In the end, if ethereal, nonpecuniary, quality-of-life values are important to people in a particular community, these values should make their community a more pleasant place in which to live, which should, in turn, translate into higher real estate values. As my earlier analysis indicates, major theatrical festivals do tend to add to the real estate values of the communities that hold them, and quite possibly some of this added real estate value is due to increased demand from people who want to live in such towns. The same cannot be said for communities with major league sports franchises. Some people may wish to live in such a community simply because of the presence of such a franchise but, as the data for Green Bay suggest, there is little evidence that this desire has any impact on real estate values.

27 A *prisoner's dilemma* refers to the situation where prisoners, arrested under suspicion of having committed a crime together, are isolated from one another and each has to decide whether to cooperate with the police and betray his fellow prisoners in exchange for his freedom or say nothing on the assumption that the other prisoners will do the same. The dilemma resides in the fact that each prisoner has a choice of only two options but cannot make the better choice without knowing what the other prisoners will do.

To the extent that new spending, in the form of tourism or government subsidies, comes from other areas within a province or even taxpayers in other provinces, the benefits in one area are offset by a decline in economic activity elsewhere.

Who Gets the Goodies?

I should emphasize that the estimated benefits discussed in this *Commentary* are only for a local area. To the extent that new spending, in the form of tourism or government subsidies, comes from other areas within a province or even taxpayers in other provinces, the benefits in one area are offset by a decline in economic activity elsewhere. Subsidies to, say, a National Hockey League team in Alberta may require an offsetting reduction of government spending in the Maritimes; federal grants to a ballet company in Manitoba may mean an increase in taxes for everyone in Canada; and funding for the arts in Toronto may require an increase in government borrowing (or a decrease in the paydown of outstanding government debt), which will affect the amount of funds available elsewhere and which might even have an impact on interest rates, thus affecting many people in Canada. From a purely nationalistic and mercantilist point of view, Canadians do not seem to mind if benefits accruing to the Canadian economy come at the expense of other countries — indeed, this attitude made it comparatively easy for many to support Toronto's bid for the 2008 Olympic Summer Games. Few people seemed concerned that Toronto's gain from tourism would have meant a loss to the countries from which Olympic visitors would have come. Nevertheless, this concern is understandably of little practical importance in the global economy, since no matter where the Games are held they represent a loss to everyone but the host city.

More typically, the economic benefits of cultural and sporting events to a local community are rarely additions to the gross domestic product of the country as a whole. In the cases of Stratford and Niagara-on-the-Lake, the international acclaim of their theater festivals attracts substantial numbers of non-Canadian visitors, whose spending represents an injection not just into the municipal spending streams but into the entire economy. In this respect, these events have a persuasive case that they benefit the Canadian economy and deserve consideration for federal support.

But it is of little comfort to residents of Saskatchewan or northern Ontario to know that their tax dollars are used to increase economic activity and real estate values in Stratford or Niagara-on-the Lake. And it is cold comfort to someone living in rented quarters in Stratford who dislikes theater to know that the festival plays a role in keeping rents high in the town. In other words, local benefits have sizable redistributional effects, and they rarely justify substantial subsidies from governments higher than the local level.

Conclusion

The research for this *Commentary* leads inexorably to the conclusion that the benefits from having sporting or cultural activities are not nearly as large as their proponents argue. The multiplier effects are usually small and might even be negative in some instances. Job creation is minimal. And, typically, but with some notable exceptions, the nonpecuniary and other benefits have little impact on real estate values in the community, suggesting that such benefits fail to induce any increase in the demand to live in those communities. Given the small size of these benefits, proponents of government funding for such activities must look elsewhere for their justification.

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